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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,843	09/19/2000	Dan Kikinis	004688.P020	5390

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EXAMINER
NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
2671	

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/664,843	KIKINIS, DAN	
	Examiner	Art Unit	
	Kimbinh T. Nguyen	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4, 6-8*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-44 are pending in the application.

Claim Objections

2. Claims 8, 19, 30 and 41 objected to because of the following informalities: The coefficients A, B, C of the hyperbolic equation which were not defined in the specification. Appropriate correction is required.

Information Disclosure Statement

3. The examiner has considered the references listed in the information disclosure statement (IDS) filed 2/22/2001, 7/16/01, 8/23/01, 1/18/02 (Paper No. 4, 6, 7 and 8), but the IDS filed 3/29/01 (paper No. 5) was not include the form PTO-1449.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-12, 14-23, 25-34 and 36-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (6,094,237) in view of Kamen et al. (6,421,067).

Claim 1, Hashimoto discloses displaying a 3D polyhedron (col. 14, lines 56-57; fig. 5); forming a plane positioned in the polyhedron, the plane comprising objects, the objects comprising interactive surfaces (col. 2, lines 11-16); Hashimoto does not suggest displaying geometric surface positioned in the polyhedron; however, Kamen et al. discloses displaying geometric surface positioned in the polyhedron, the geometric surface comprising objects (fig. 2, an octahedron 563) (col. 14, lines 4-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the Kamen's teaching into Hashimoto's method for producing the claimed invention because using the Electronic Programming Guide (EPG) comprises a set of geometric surfaces located in virtual 3D space, it would provide the user with a more powerful and convenient television in a desktop environment, while simultaneously increasing the efficiency of navigation by the user through the EPG.

Claim 3, Kamen et al. discloses the objects are independent (particular shape at a particular angle) of the polyhedron (col. 14, lines 8-26).

Claim 4, Kamen et al. discloses the polyhedron is displayed with a perpendicular view (col. 5, lines 8-9).

Claim 5, Kamen et al. discloses the polyhedron is displayed with an isometric view (col. 5, lines 7-8; fig. 2).

Claim 6, Hashimoto et al. discloses the plane is positioned in front of the geometric surfaces (col. 3, lines 31-34).

Claim 7, Hashimoto discloses the objects (channels) represent a television program (col. 5, lines 33-40).

Claim 8, both Hashimoto and Kamen do not suggest the hyperbolic plane is defined by the equation y= A + 1/(Bx +C). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature, because the equation y= A + 1/(Bx +C) is a translation of the well known hyperbolic equation 1/x to the coordinate of x = -C/B.

Claim 9, Hashimoto et al. discloses the EPG is displayed exclusive of 3D graphics circuitry (col. 6, lines 44-52).

Claim 10, Kamen et al. discloses the polyhedron is a cube (col. 14, lines 13-14).

Claim 11, Hashimoto discloses the objects positioned in the plane (at the front position) represent television programs which are preferred (to select a desired channel) (col. 10, lines 25-30); Hashimoto does not suggest the objects positioned in the geometric surface represent television programs which are not preferred; however, Kamen et al. discloses the EPG comprises textured geometric surfaces with video images from television programs, the geometric surfaces including both data surfaces and video surfaces, can be arbitrarily positioned in virtual space and a viewer can still determine which programs are not of interest (not preferred) (col. 3, lines 24-49).

Claim 12 claims an Electronic Programming Guide comprising: three dimensional polyhedron (Hashimoto, fig. 5); the polyhedron comprising a plane and geometric surface positioned (Hashimoto, col. 2, lines 11-16); the plane comprising objects; geometric surface comprising objects; and objects comprising interactive surface (Kamen, col. 14, lines 4-27). These features correspond to a method for

displaying an Electronic Program Guide discussed in claim 1; therefore, claim 12 is rejected on the same basis set forth in claim 1 and by the rationale provided above.

Claims 14-22 which correspond to the method of claims 3-7 and 9-11 (see discussions in claims 3-7). Therefore, claims 14-18 and 20-22 are rejected on the same basis set forth in claims 3-7 and 9-11.

Claims 23 and 25-33 are apparatus claims corresponding to the method claims 1, 3-7 and 9-11 (see discussions in claims 1, 3-7 and 9-11). Therefore, claims 23, 25-29 and 20-22 are rejected on the same basis set forth in claims 1, 3-7 and 9-11 and by the rationale provided above.

Claims 34 and 36-44, Hashimoto et al. discloses a machine readable medium having stored sequences of instructions which are executable by a processor (col. 6, lines 44-57), cause the system to perform a method for displaying an Electronic Programming Guide (EPG) comprising claimed elements corresponding to the method of claims 1, 3-7 and 9-11. Therefore, claims 34, 36-40 and 42-44 are rejected on the same basis set forth in claims 1, 3-7 and 9-11, and by the rationale provided in claims 1, 3-7 and 9-11.

6. Claims 2, 13, 24 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (6,094,237) in view of Kamen et al. (6,421,067) as applied to claims above, and further in view of Glenn et al. (6, 043,825).

Claim 2, Hashimoto and Kamen do not suggest hyperbolic plane; however, Glenn et al. discloses the geometric surfaces are hyperbolic planes (the three dimensional interconnection network consists of vertices defined by a series of

perpendicular quadrilaterals; where the vertices of the quadrilaterals are mapped onto a 2D hyperbolic plane using geometric functions based on the vertex chosen (abstract) (col. 3, lines 65 through col. 4, line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the Glenn's teaching into Hashimoto's method for producing the claimed invention, because using a hyperbolic projection on the hyperbolic plane of the information layout, it would create the nearest neighbor data points for each vertex (reduce the distance) in each quadrilateral, provide perpendicular quadrilaterals (perpendicular view) to the list of data points of reference to improve program guide.

Claim 13, Glenn et al. discloses the geometric surfaces are hyperbolic planes (col. 3, lines 65 through col. 4, line 9). Claim 13 corresponding to the method of claim 2, and is rejected on the same basis set forth in claim 2.

Claim 24 is an apparatus claim corresponding to the method claim 2 and is rejected on the same basis set forth in claim 2.

Claim 35 corresponds to the method claim 2 and is rejected on the same basis set forth in claim 2.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lindholm U.S. (5,592,599) discloses video special effects system with graphical operation interface.

- Dickson U.S. (4,183,153) discloses hyperbolic geometry model.
- Bedard U.S. (5,801,747) discloses method and apparatus for creating a television viewer profile.
- Alexander et al. U.S. (6,177,931) discloses systems and method for displaying and recording control interface with television programs, video, advertising information.
- Shiga et al. U.S. (6,005,562) discloses electronic program guide system using images of reduced size to identify respective programs.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

October 17, 2002

Kimbinh Nguyen

Patent Examiner AU 2671